Application Number 10/050,299
Responsive to Office Action mailed March 18, 2005

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently amended): A method comprising:

creating a first generation check disk from a master without destroying the master, wherein creating the check disk includes depositing at least one of the following materials on the check disk: a reflective material, a phase change material, and a magneto-optic material;

testing the check disk; and

creating a first generation stamper from the master when the check disk is acceptable, wherein creating the first generation check disk comprises:

coating a master surface with a release layer;

coating a photopolymer layer on a check disk substrate;

contacting the photopolymer layer with the release layer;

curing the photopolymer layer to bond the photopolymer layer to the check disk substrate and to preserve a pattern of the master surface in the photopolymer layer; and

separating the photopolymer layer from the release layer.

Claim 2 (Previously presented): A method comprising:

creating a first generation check disk from a master without destroying the master;

delivering the check disk to a customer; and creating a first generation stamper from the master when the customer indicates acceptance of the check disk.

Claim 3 (Previously presented): The method of claim 2, wherein creating the first generation check disk comprises:

coating a master surface with a release layer;

coating a photopolymer layer on a check disk substrate;

contacting the photopolymer layer with the release layer;

curing the photopolymer layer to bond the photopolymer layer to the check disk substrate and to preserve a pattern of the master surface in the photopolymer layer; and

separating the photopolymer layer from the release layer.

Claim 4 (Currently amended): The method of claim ~~1~~3, wherein ~~creating the first generation check disk further includes~~ depositing the material on the check disk comprises depositing the material ~~at least one of the following~~ on the photopolymer layer~~: a reflective material, a phase change material, and a magneto-optic material~~.

Claim 5 (Previously presented): The method of claim 1, wherein creating the first generation check disk further includes cutting the check disk to size.

Claim 6 (Previously presented): The method of claim 1, further comprising curing the photopolymer layer without masking the photopolymer layer so that the photopolymer layer is cured to substantially the entire surface of the check disk substrate.

Claim 7 (Original): The method of claim 1, further comprising creating the master.

Claim 8 (Original): The method of claim 1, wherein testing the check disk includes testing feature geometries of the check disk.

Claim 9 (Original): The method of claim 1, wherein testing the check disk comprises testing the check disk against one or more criteria, wherein the check disk is acceptable when it satisfies the criteria.

Claim 10 (Original): The method of claim 1, wherein testing the check disk includes measuring read back signals in terms of at least one parameter selected from the group consisting of: push-pull, jitter, burst error rate (BER), asymmetry, and carrier noise ratio (CNR).

Claim 11 (Original): The method of claim 1, wherein the master is a first master, the method further comprising creating a second master when the check disk is not acceptable.

Claim 12 (Original): The method of claim 11, wherein the process of creating a second master includes adjusting master feature geometries to account for errors determined during the testing of the check disk.

Claim 13 (Previously presented): The method of claim 11, further comprising:

creating another first generation check disk from the second master without destroying the second master;

testing the check disk created from the second master; and

creating a first generation stamper from the second master when the check disk created from the second master is acceptable.

Claim 14 (Original): The method of claim 1, further comprising:

creating a second generation stamper from the first generation stamper; and

using the second generation stamper in a mass production process to create a number replica disks.

Claim 15 (Original): The method of claim 14, wherein the replica disks have feature geometries substantially similar to the feature geometries of the check disk.

Claim 16 (Original): The method of claim 14, wherein the mass production process is an injection molding process.

Claim 17 (Original): The method of claim 14, wherein the mass production process is a rolling bead process.

Claim 18 (Original): The method of claim 1, further comprising:

creating first and second first generation check disks from first and second masters without destroying the masters, wherein each of the first and second check disks respectively correspond to one side of a two-sided optical data storage medium;

testing the first and second check disks; and

creating first and second first generation stampers from the first and second masters when check disks are acceptable.

Claim 19 (Original): The method of claim 18, further comprising:

creating first and second, second generation stampers from the first and second first generation stampers; and

using the first and second, second generation stampers in a mass production process to create a number two-sided replica disks.

Claim 20 (Currently amended): A method comprising:

creating a master;

creating a check disk from the master without destroying the master by:

coating a master surface with a release layer;

coating a photopolymer layer on a check disk substrate;

contacting the photopolymer layer with the release layer;

curing the photopolymer layer to bond the photopolymer layer to the check disk substrate and to preserve a pattern of the master surface in the photopolymer layer; and

separating the photopolymer layer from the release layer; and

depositing at least one of the following on the photopolymer layer: a reflective material, a phase change material, and a magneto-optic material;

testing feature geometries of the check disk;

creating a first generation stamper from the master when check disk is acceptable;

creating a second generation stamper from the first generation stamper when the check disk is acceptable; and

using the second generation stamper in a mass production process to create a number replica disks when the check disk is acceptable.

Claim 21 (Original): The method of claim 20, wherein the master is a first master, the method further comprising creating a second master when the check disk is not acceptable, wherein the process of creating a second master includes adjusting master feature geometries to account for errors determined during the testing of the check disk.

Claim 22 (Previously presented): The method of claim 21, further comprising:

creating another first generation check disk from the second master without destroying the second master;

testing the check disk created from the second master; and

creating a first generation stamper from the second master when the check disk created from the second master is acceptable.

Claim 23 (Canceled)